



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,799	11/20/2001	Sheng-Guo Wang		1612

7590 06/06/2005

Dr. Sheng-Guo Wang  
2516 Radrick Ln  
Charlotte, NC 28262

EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/989,799

Applicant(s)

WANG, SHENG-GUO

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-22, 24-26, 28, 30-36 is/are pending in the application.
- 4a) Of the above claim(s) 6, 11 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-22, 24-26, 28, 30-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10 May 2005 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Examiner could find no support for the "data sets" of lines 14, 16, 18, 20, 21 and 24 – either explicit or implicit. Nor is there any support for their use as claimed, for example the preselected nominal value for the data sets. This is deemed to be a prima facie showing on failure to comply with the requirement. The burden is now on

Art Unit: 1731

Applicant to show the requirement is complied with, or to amend the claims so that they comply.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-22, 24-26, 28, 30-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21: Line 12 – there is no antecedent basis for “the control process”. Line 17 refers to the outer diameter “and” shape; this is confusing because line 3 refers to the diameter “or” shape.

From MPEP 2173.05(h):

Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being “selected from the group consisting of A, B and C.” See *Ex parte Markush*, 1925 C.D. 126 (Comm’r Pat. 1925).

Presently, claim 21, line 12 has a group which is very similar to the above accepted form, but there is no indication that the group is “consisting of” the members – rather it is “comprising”. Therefore it is impossible for anyone to tell if applicant’s group is open or closed to additional members - and thus the claim presents uncertainty or ambiguity

with respect to the question of scope of the claim. If the above "acceptable form" is not desirable for Applicant, Examiner can be telephoned for other expressions.

The language "robustly", "robust performance", "robust diameter-controlled" and "robust quality" are "words of degree" which are imprecise unless a definition or guideline has been set forth in the specification or the term is otherwise well known in the art. See Seattle Box Co. v. Industrial Crating and Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984). However, there is no evidence in application (nor is Examiner aware of any evidence) that the words "robustly", "robust performance" and "robust quality" have any art-recognized meaning. Nor is there any guidance or definition in the specification that would allow one of ordinary skill in the art to understand the meaning of the words "robustly", "robust performance" and "robust quality". As far as Examiner can tell, Applicant has not referred to any portion of the specification or any evidence to define the scope of these words. Accordingly, it is deemed that one of ordinary skill in this art would not have been apprised of the scope of claims. Therefore, claims 21-22, 24-26, 28, 30-36 are indefinite and fail to meet the requirement of 35 U.S.C. 112, second paragraph.

The last 4 lines of claim 21 are confusing for the following reasons (1) the claim states the process "will" be controlled; it is unclear if whether such need actually be controlled, or if it is an intended use. (2) It is unclear whether there must actually be deviations and whether the process need to take account of them. It is noted that the claim only requires one measurement of the preform and one measurement of the fiber. But to have deviations, one typically would have multiple measurements.

Claim 22: there is no antecedent basis for “the deviations” and “the preform diameters or shape.”

Claim 24, there is confusing or missing antecedent basis for “their respective deviations”, “the respective nominal values”, and “said optical fiber drawing process control”.

Claim 25: there is missing or confusing antecedent basis for “said nominal preform value”, “said nominal fiber value” and “its deviation from the predetermined nominal preform value” (lines 7-8).

Claim 26 at first mentions measuring the diameters at “locations” , but then discusses various ‘position’s (lines 8-9). It is unclear if the locations are the same as positions.

Claim 30: there is no antecedent basis for “the measurement data” (line 8): it is unclear if it refers to both of the measurements of lines 3 and 6 – or if it can be just the measurement data from one or the other.

Claim 32: there is no antecedent basis for “said control method” line 5. The relevance of the “(final)” is not understood – one would not know if he could avoid infringement by having an additional device, so that the second device is not the final one.

The term “based on” is indefinite as to its meaning and thus makes the claims indefinite. As argued by Applicant on page 35 of the 5.10.05 response, “Really, the

Art Unit: 1731

phrase 'based on' introduces a specific control law or regulation for a control system and a control process". It appears that applicant is newly defining the scope of "based on". Examiner could not find any basis for such a definition in the present specification or the prior art which is commensurate with Applicant's arguments.

First it is noted that the specification does not clearly set forth an explicit definition, thus Applicant is not acting as lexicographer. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F3d 985, 989 (Fed. Cir.1999).

The specification must clearly set forth the definition explicitly and with reasonable clarity, deliberateness and precision. *Teleflex Inc. v. Ficoso North America Corp.*, 63 USPQ2d 1374, 1381 (fed. Cir. 2002), *Rexnord Corp. v. Laitram Corp.* 60 USPQ2d 1851, 1854 (fed. Cir. 2001) and MPEP 2111.01.

In other words, Applicant cannot now define what is meant by "based on". Such a definition would have to have been made in the specification when the application is originally filed.

Page 36, line 17: it is argued that "historical measurement data" is really time lead or lag measurement. Examiner could find no support for such a definition/interpretation. Applicant has not pointed out the support for such. It is deemed that the record now confusing as to what is meant by the claim language.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1731

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 21, 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harding 4793840.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (1)**

Measuring outer diameter or shape step: See col. 3, lines 10-11.

Feeding step: col. 2, lines 44-45 and elsewhere.

Heating and melting step: col. 2, lines 7-9 and elsewhere.

Drawing step: col. 2, lines 9-10.

Measuring diameter of fiber: col. 2, lines 14-15.

The control at lines 12-14 (of Applicant's line 21): it is clear from Harding's sole figure that both of the claimed control speeds are disclosed.

As to the "robust"-type limitations: as discussed in the above 112 rejections – "robust" is a term of degree. It is deemed that the Harding's process had robust control and robust quality compared to the standards of 1986 (the year of Harding's invention) : see col. 1, lines 27-29. Also, since Harding does the same thing that Applicant does,



Art Unit: 1731

Harding should also have an equally robust process. As to the deviations: see col. 2, lines 56- 68 and col. 3, lines 1-20 which reasonably suggest that deviations in preform are not detrimental to the process.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (2)**

Harding does not clearly disclose the providing step: however, col. 3, lines 5-12 discloses that various measurements/calculations are made.

This is the only difference.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (3)**

*Resolving the level of ordinary skill in the pertinent art.*

The courts have routinely held that "ordinary skill" includes the ability to automate a manual process.

**III. AUTOMATING A MANUAL ACTIVITY**

In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent-mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.).

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (4)**

Art Unit: 1731

*Considering objective evidence present in the application indicating obviousness or nonobviousness.*

Applicant has not provided any objective evidence. All evidence appears to be subjective.

In view of the four inquiries, it is deemed that the invention is obvious as follows:

Although inquiry 2 reveals that there is no indication whether these measurements/calculations are done by hand or by machine, this is not important – because inquiry 3 reveals that providing an automatic apparatus is a routine and obvious practice.

In this case, it would have been obvious to one of ordinary skill to perform the Harding process, by using a completely automatic machine to do the steps that Harding discloses, namely the measuring, calculating, etc. It is deemed that the automatic system in combination with the features that Harding explicitly teaches constitutes the “control system”. The diameter is clearly measured – because that is how one determines an average diameter (col. 3, lines 10-11) by measuring multiple places, adding the measurements, and dividing by the number of measurements. The predetermined nominal value is deemed to be Harding’s average value. The fiber values are clearly taught in col. 3 also.

Art Unit: 1731

Claim 22: clearly all the values are used in the process. It is understood that the values may not be used in the same manner that applicant uses them. However, the claims are much broader in scope than the specific embodiments/calculations that Applicant uses.

As to "in the face": this is deemed to be interpreted as "in the presence". Clearly, the Harding process is effective in the presence/face of the deviations.

Claim 24 is deemed to be met. Claim 24 does not appear to substantially limit claim 21. All of the control is "based on" everything else. If any process parameter is changed, then the resultant process will change.

Claim 25: It is deemed that such is inherently met because it is presumed that Harding process is enabled and works as described. It would have been obvious that Harding's fiber was suitable for Harding's application. Thus the resultant fiber does not have any parameter which is not "allowable" – including shrinkage. In other words, whether something is "allowable" (permissible, acceptable, tolerable, etc.) is all a matter of perspective and desired use. Whereas Harding may have some unacceptable shrinkage (from Applicant's perspective), Applicant's own shrinkage could be not acceptable/allowable to someone else who desires some very specific fiber.

As to the control system: it is clear that Harding's system generates signals for the purpose of controlling drawing speed – and it is "based on" everything including inconsequential stuff like the gravity from the moon. For example, if Hardings' average

Art Unit: 1731

diameter was 10 cm, then almost the entire process would be different from a process where the diameter is 15 cm. Harding's process is inherently based on every one of the claimed parameters.

Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura 5073179 in view of Urruti 5551967.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (1)**

Determining the scope and contents of the prior art.

Yoshimura of similar content and scope to Applicant's invention. One can readily see from the Yoshimura drawings that Yoshimura has heating, melting, drawing, coating, controlling, and deviations. Furthermore, Yoshimura discloses that it is desirable to locate the diameter sensor near the furnace to reduce time lag, and thus increase control gain (col. 1, lines 39-44). Yoshimura, teaches to locate the sensor at a location corresponding to a diameter that is off by only 0.5% (col. 4, lines 1-27).

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (2)**

*Ascertaining the differences between the prior art and the claims at issue.*

The differences between Yoshimura and the claims at issue: is the use of two measurements of diameter at two different locations and the use of both diameters to control the system.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (1)**

*3.\*Resolving the level of ordinary skill in the pertinent art.*

The level of skill of the theoretical “one of ordinary skill” includes the knowledge contains in Urruti: that one can obtain “dramatic improvement” by having two sensors, and that one can have one sensor very close to the furnace so as to reduce lag time – which is the same desire that Yoshimura has: getting the sensor close to the furnace. See Urruti, col. 2, lines 23-24. Urruti achieves this goal by having two sensors – and has achieved “dramatic improvement” in control col. 3, lines 64-67. It is noted Urruti was able to place the first sensor at a location much closer to the furnace – where the fiber still had 4% shrinkage left – as opposed to Yoshimura’s 0.5%. (See col. 5, line 8-20 of Yoshimura.)

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (4)**

*Considering objective evidence present in the application indicating obviousness or nonobviousness.*

Applicant has not provided any objective evidence. All evidence appears to be subjective.

It would have been obvious to use two diameter sensors in the Yoshimura process so as to obtain “dramatic improvement” in diameter control.

The first 8 lines of the claim is clearly met by the above combination. As to lines 9-12, it is noted that such finish with "or immediately before the coating" – this is the part that is met than by the combination. It is deemed that the "or" is a choice between "not larger..." or is immediately before.

As indicated above, examiner could find no mention of "data sets" in the specification – thus Examiner has no idea what they include or don't include. It is deemed that one can arbitrarily group all the data into whatever sets one desires and that such will read on the claimed invention. The deviations are deemed to be represented by the comparison operator of Yoshimura as well as the PID controllers of Urruti.

The robustness: see Urruti col. 2, line 21.

Claim 28: figure 5 disclose a controller for glass feed in the upper right corner. It would have been obvious to measure the preform so that one will know how fast one should feed the glass. Examiner takes Official notice that one of ordinary skill is very familiar with the concept of conservation of mass: because one has to remove the same amount of material that one puts in. Thus if one is withdrawing fiber at the rate of 100 grams a minute, under a steady state process, one would have to feed in glass at 100 grams a minute. Thus it would have been obvious to one of ordinary skill to take at least one diameter measurement of the starting preform to determine its mass so that one can determine what the corresponding rates of feed/withdrawal would be.

Art Unit: 1731

As to the deviations and nominal diameters – all such would be inherently part of the process: the process would proceed regardless of deviations and a nominal diameter – and such would effect the process. Thus the process is based on such characteristics. This is not to say it is based on the calculated/measured values. The claim is open to actually deviations – it is not limited to a calculated deviation.

The references can also be applied with Urruti as the primary reference:

Urruti discloses the invention substantially as claimed: see figure 5, the associated text and how Urruti was applied in the prior rejections. However, Urruti has a coating step before the second diameter measurement.

It would have been obvious to not apply the hermetic coating if it is not desired:

**From MPEP 2144.04**

## II. ELIMINATION OF A STEP OR AN ELEMENT AND ITS FUNCTION

### A. Omission of an Element and Its Function Is Obvious If the Function of the Element Is Not Desired

Ex parte Wu , 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) (Claims at issue were directed to a method for inhibiting corrosion on metal surfaces using a composition consisting of epoxy resin, petroleum sulfonate, and hydrocarbon diluent. The claims were rejected over a primary reference which disclosed an anticorrosion composition of epoxy resin, hydrocarbon diluent, and polybasic acid salts wherein said salts were taught to be beneficial when employed in a freshwater environment, in view of secondary references which clearly suggested the addition of petroleum sulfonate to corrosion inhibiting compositions. The Board affirmed the rejection, holding that it would have been obvious to omit the polybasic acid salts of the primary reference where the function attributed to such salt is not desired or required, such as in compositions for providing corrosion resistance in environments which do not encounter fresh water.). See also In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired.); and In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

Yoshimura is cited as showing it is known to draw fibers without a hermetic coating. It would have been obvious to not desire a hermetic coating where the fiber will not be used in an environment with a threat of water damage.

Claims 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urruti 5551967 in view of Yamamura 6220057.

See the prior Office Action for the manner in which the references were combined. To summarize briefly:

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (1)**

*Determining the scope and contents of the prior art.*

Based on Applicant's definition of "bare fiber" on page 3, the scope and content of Urruti is substantially the same as applicant.

Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (2) *Ascertaining the differences between the prior art and the claims at issue.*

Urruti does NOT have the claimed preform measurement.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (3)**

*Resolving the level of ordinary skill in the pertinent art.*



Art Unit: 1731

The level of ordinary skill includes monitoring what is put into a process. As evidenced by Yamamura, it is known that diameter changes and to take account of the changes and that taking account of the changes. See prior Office actions which discusses Yamamura. It is well within the level of ordinary skill to compensate for the uneven diameters as discussed with Yamamura.

**Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) inquiry (4)**

*Considering objective evidence present in the application indicating obviousness or nonobviousness.*

Applicant has not provided any objective evidence. All evidence appears to be subjective.

Claim 33 has a formula that was not previously mentioned in the claims. It is noted that the formula need only be "satisfied". The claim does not actually require that the formula be used in the algorithm. It is noted that the equation is merely a mass balance equation. It is impossible to not satisfy the equation.

Claims 35-36 it is deemed that these limitations are inherently met because all of the signals are inherently based on all other parameters. One cannot isolate the features because they are all interrelated: when a thinner part of the preform enters the furnace, there is less thermal mass. Less thermal mass means the same amount of heat will cause the smaller mass to get hotter. The hotter glass is more fluid and gets

Art Unit: 1731

drawn thinner, etc. etc. Everything is "based on" nearly everything else to some degree: this applies to claim 34.

### ***Response to Arguments***

The arguments filed 5-10-05 have been considered. However most of those arguments are substantially moot in light of the new grounds of rejection. The only rejection that is still maintained is the rejection of claims 30-34. Those arguments are addressed as followed:

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation comes from knowledge generally available to one of ordinary skill in the art. Applicant repeatedly argues that the references do not provide the motivation/suggestion to combine. Examiner completely understands this – no rejection indicates the motivation comes from the references themselves. Presently, one of ordinary skill would combine the relevant teachings to obtain "dramatic improvement" and a significantly more robust process. It is noted that Urruti and Applicant teach the same thing: that using two

Art Unit: 1731

diameter monitors results in a significantly more robust process (Urruti col. 2, lines 20-22).

Applicant's discussion of Kenmochi is not understood. There is no rejection that utilizes Kenmochi.

As to the arguments that are referenced by letter and number: such are confusing. Applicant is reminded of the duty under 37 CFR 1.111:

**37 CFR § 1.111 Reply by applicant or patent owner to a non-final Office action.**

(a)

(1) If the Office action after the first examination (§ 1.104) is adverse in any respect, the applicant or patent owner, if he or she persists in his or her application for a patent or reexamination proceeding, must reply and request reconsideration or further examination, with or without amendment. See §§ 1.135 and 1.136 for time for reply to avoid abandonment.

(2) A second (or subsequent) supplemental reply will be entered unless disapproved by the Director. A second (or subsequent) supplemental reply may be disapproved if the second (or subsequent) supplemental reply unduly interferes with an Office action being prepared in response to the previous reply. Factors that will be considered in disapproving a second (or subsequent) supplemental reply include:

(i) The state of preparation of an Office action responsive to the previous reply as of the date of receipt (§ 1.6) of the second (or subsequent) supplemental reply by the Office; and

(ii) The nature of any changes to the specification or claims that would result from entry of the second (or subsequent) supplemental reply.

(b) In order to be entitled to reconsideration or further examination, the applicant or patent owner must reply to the Office action. **The reply by the applicant or patent owner must be reduced to a writing which distinctly and specifically points out the supposed errors in the examiner's action and must reply to every ground of objection and rejection in the prior Office action. The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references.** If

the reply is with respect to an application, a request may be made that objections or requirements as to form not necessary to further consideration of the claims be held in abeyance until allowable subject matter is indicated. The applicant's or patent owner's reply must appear throughout to be a bona fide attempt to advance the application or the reexamination proceeding to final action. A general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section.

(c) In amending in reply to a rejection of claims in an application or patent under reexamination, the applicant or patent owner must clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art

Art Unit: 1731

disclosed by the references cited or the objections made. The applicant or patent owner must also show how the amendments avoid such references or objections

Specifically, see the emphasized portion above. Those arguments that simply refer to letters and numbers are deemed to fail to distinctly and specifically point out the errors and the distinctions. The short-hand notation (e.g. "please refer to III. B.2.2") puts an unreasonable burden on the Office to search through the record to determine what Applicants arguments are. Thus the arguments that fail to distinctly and specifically point out the errors will not be fully addressed in this action.

As to Applicant's request for Examiner to respect the facts, science, engineering and technology to give fair and reasonable analysis and conclusion. However, patents are legal documents. Laws, regulations, court decisions and Patent Office Policy are at least as important than engineering principles.

As to the arguments regarding the combination of Yamamura and Urruti, it is argued that Yamamura is of different scope. This is not (by itself) very relevant. No two patents are exactly of the same scope – thus every two patents are of different scope. What matters is what are the differences: what is the difference between stretching one preform a lot to make very thin fiber, and stretching a preform moderately to create a rod? Examiner is of the opinion that the difference is very small to one of ordinary skill in the Optical fiber art. The second step of the Graham v John Deere analysis: (B) Ascertain the differences between the prior art and the claims at issue. It appears that Applicant has found a difference (i.e. that Yamamura makes a rod, not a fiber) and then decided that this reference is cannot be applied. Clearly the Supreme Court

Art Unit: 1731

acknowledges that there differences. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) inquiry (2) "Ascertaining the differences between the prior art and the claims at issue."

As to the "based on" interpretation. Applicant argues that control is not inherently based on diameter, deviations, etc. To support this position, Applicant argues, "Really, the phrase 'based on' introduces a specific control law or regulation for a control system and a control process". As pointed out in the above 112 rejection, Applicant cannot now limit the scope of "based on". The Examiner/Office has the duty and responsibility to interpret the scope of the claims broadly.

The PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution. *Hyatt*, 211 F.3d at 1372. The "broadest reasonable interpretation" rule recognizes that "before a patent is granted the claims are readily amended as part of the examination process." *Burlington Indus. v. Quigg*, 822 F.2d 1581, 1583 (Fed. Cir. 1987). Thus, a patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969). Additionally, the broadest reasonable interpretation rule "serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (quoting *In re Yamamoto*, 740 F.2d 1569, 1571-72 (Fed. Cir. 1984)).

Presently, it is deemed that the broadest reasonable interpretation of "based on" means that it is a factor in the process. For example, if a preform has a 50% deviation in diameter, the 50% deviation will inherently effect the process – regardless of whether a computer controller measures the deviation or not. Whereas Applicant's invention

Art Unit: 1731

might be directed to a specific control law/regulation that uses the diameter – the claims are not limited to any specific control law.

If Applicant considers the broad interpretation to be unreasonable and Applicant does not wish to exercise the “*opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application*”, then Applicant should point out why the Office’s interpretation is not the “broadest reasonable”, what the broadest reasonable interpretation is, and preferably point out why it is reasonable. Mere argument that the Office’s interpretation is incorrect (and giving no guidance/suggestion as to what the correct interpretation is) will likely be deemed as non-responsive.

As to the arguments that preform manufacture and fiber drawing are two different departments – this is not very relevant. It has been held that a prior art reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both conditions are met. The field of endeavor of all the references are the same: optical fiber manufacture. Yamamura’s is reasonably pertinent to the particular problem with which applicant was concerned: compensating for variations in preform diameter when drawing the preform into an elongated body.

As to the combination of references being inoperable:

Examiner notes From MPEP 2145:

Art Unit: 1731

III. ARGUING THAT PRIOR ART DEVICES ARE NOT PHYSICALLY COMBINABLE

See also *In re Sneed*, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983) ("[I]t is not necessary that the inventions of the references be physically combinable to render obvious the invention under review."); and *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973) ("Combining the teachings of references does not involve an ability to combine their specific structures.").

As to the assertion that the Office failed to address the arguments based on different facts, materials and evidences. Applicant has not supplied facts, materials and evidences. Rather applicant has only given allegations and arguments. Rather than broadly point to pages 26-66 of a previous communication. Such places an unreasonable burden on the Office to find out what Applicant is referring to. Any time applicant refers particular evidence or facts, such should be pointed out clearly and distinctly.

For example, page 30 of the 5-10-2005 reponse refers to unexpected results. This is merely an unfounded allegation which carries no patentable weight. Applicant needs to demonstrate this as a fact.

Applicant bear the burden of establishing that the claimed subject matter in fact imparts unexpected properties. See *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). In this regard, it is noted that applicants have not furnished any detailed data regarding the actual experiments run.

More importantly, even assuming applicant gets unexpected results with a particular algorithm, the claims are not limited to a specific algorithm. The claims are so broad that they probably encompass algorithms that fail to get unexpected results.

Art Unit: 1731

It is well established that the evidence relied on to establish unobviousness must be commensurate in scope with the claimed subject matter. See In re Kerkhoven, 626 F.2d 846, 851, 205 USPQ 1069, 1072-1073 (CCPA 1980) and IN re Clemens, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980).

As to the “based on” limitation – whereas Applicant points out that “based on” is valid in other US Patents. Applicant is required to point out specifically where those terms are used and specifically where the definition of “based on” is derived from. Until such is pointed out, it is deemed that every US patent which uses “based on” should be interpreted as using the broadest reasonable interpretation – rather than the narrow interpretation that Applicant is using.

Applicant’s general assertions regarding US patents are not very relevant. There is nothing to show that any patent was allowed because of any “based on” limitation. Applicant needs to explicitly point out how the relevant US patents were allowed because of the “based on” language.

It is further argued that “based on” in claim 31 defines that “the control signals are generated by computation.....” Examiner could find no basis for such a definition. Claim 33 does not require any step of generating or computing. Applicant is not permitted to redefine what is meant by “based on”.

It is further argued that “historical measurement data” is really time lead or lag measurement. Examiner could find any support for such a definition. Thus it is deemed to be mere argument.



Art Unit: 1731

Arguments based on Applicant's technical expertise are noted – however, patents are mostly legal documents. It does not matter whether the inventor is a person of great learning or a 5-year-old child. Only the invention matters, not the inventor.

It is deemed that all arguments that pertain to the rejection based on the combination of Urruti and Yamamura were addressed. Any that not addressed were overlooked because they were not clearly indicative as being related to the rejection was previously maintained and is still maintained.

### ***Conclusion***

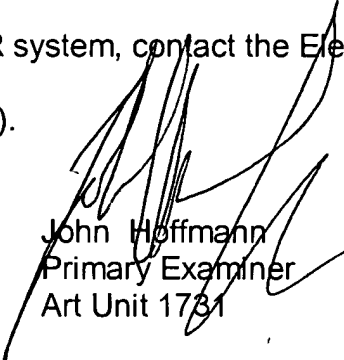
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kohei (JP 06-206734) is cited as being cumulative to Urruti.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

6-1-07

jmh